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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|----------------------------------|-------------|----------------------|---------------------|------------------|
| 09/823,802 | 03/30/2001 | Gautam Dewan | 004073.P015 | 7405 |
| 32294 | 7590 | 10/05/2005 | EXAMINER | |
| SQUIRE, SANDERS & DEMPSEY L.L.P. | | | HO, DUC CHI | |
| 14TH FLOOR | | | ART UNIT | |
| 8000 TOWERS CRESCENT | | | PAPER NUMBER | |
| TYSONS CORNER, VA 22182 | | | 2665 | |

DATE MAILED: 10/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/823,802

Applicant(s)

DEWAN ET AL.

Examiner

Duc C. Ho

Art Unit

2665

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 June 2005.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☒ Claim(s) 16-20 and 26-35 is/are allowed.
6) ☒ Claim(s) 1,2,7,8,13,14,21 and 23-25 is/are rejected.
7) ☒ Claim(s) 3-6,9-12,15 and 22 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

3. Claim 1-2, 7-8, 13-14, 21, and 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gobuyan et al. (US 5,917,821), hereinafter referred to as Gobuyan, in view of Kerr et al. (US 6,920,562), hereinafter referred to as Kerr.

Regarding claim 1, Gobuyan discloses look-up engine for packet-based network.

loading an instruction word within the micro-controller (32 bit microcode instructions can be down load within the lookup engine controller 3-fig. 3), the instruction word having a plurality of instruction fields (the microcode instruction includes four fields, col. 12, lines.10-20); and

each instruction field related to a specific operation for parsing a packet or encapsulating data to form a packet (each field of the microcode instruction is inherently a specific operation for parsing a packet, see col. 12-line 24-67).

Gobuyan, however, doesn't expressly disclose processing the plurality of instruction fields in parallel.

One skill in the art would recognize the advantage of processing instruction fields in parallel, that is to eliminate the need for hardware-based schedulers while enabling completion of multiple instructions per cycle.

Kerr discloses tightly coupled software protocol decode with hardware data encryption. The TMC core 700-fig. 5 loads instruction word from the IRAM 520-fig. 5, see col. 6-line 61 to col. 8-line 25. The instruction word 600-fig. 6 has a plurality of fields, see col. 8, lines 25-30, and wherein the instruction fields include opcodes, which can be processed in parallel, see col. 8, lines 25-30.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine Gobuyan with Kerr.

The suggestion/motivation for doing so would have been to eliminate the need for hardware-based schedulers while enabling completion of multiple instructions per cycle.

Therefore, it would have been obvious to combine Gobuyan with Kerr to obtain the invention as specified in claim 1.

Regarding claim 2, in Gobuyan a packet includes a protocol header.

Regarding claims 7, and 21, these claims have similar limitations as claim 1. Therefore, they are rejected under Gobuyan-Kerr for the same reasons set forth in the rejection of claim 1.

Regarding claim 8, this claim has similar limitations as claim 2. Therefore, it is rejected under Gobuyan-Kerr for the same reasons set forth in the rejection of claim 2.

Regarding claim 13, in Gobuyan the lookup engine controller is a system on a chip.

Regarding claim 14, in Gobuyan- the lookup engine controller 3-fig. 3 includes buffer memory 11-12 for forming packets.

Regarding claim 23, in Gobuyan each field is associated with a set of microinstruction.

Regarding claim 24, in Gobuyan the instruction is inherently executed in a plurality of stages.

Regarding claim 25, in Gobuyan the stages inherently includes a prefect, fetch, decode, and an execute stage.

Allowable Subject Matter

4. Claims 16-20, and 26-35 are allowed.
5. Claims 3-6, 9-12, 15, and 22 are objected to as being independent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Duc Ho whose telephone number is (571) 272-3147. The examiner can normally be reached on Monday through Friday from 7:00 am to 3:30 pm.

If attempt to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu, can be reached on (571) 272-3155.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-2600.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

7. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Patent Examiner

A handwritten signature in black ink, appearing to read 'Duc Ho', with a stylized flourish at the end.

Duc Ho

09-30-05